PATENT *PFW*

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
( MBHB Case No. 02-728-B (400.120) )

In re Application of:

McSwiggen, James A.

Serial No.: 10/607,933

Filed: June 27, 2003

For: RNA Interference Mediated Treatment  
Of Alzheimer's Disease Using Short  
Interfering Nucleic Acid

Group Art Unit: 1645

Examiner: Not Assigned

Conf. No. 8658

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

## TRANSMITTAL LETTER

In regard to the above identified application:

1. We are transmitting herewith the attached papers for the above identified new patent application:

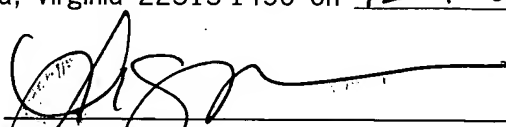
- ☒ Third Supplemental Information Disclosure Statement;
- ☒ Third Supplemental Information Disclosure Statement (IDS) PTO-1449 Form; and
- ☒ Return Receipt Postcard.

2. With respect to additional fees, no fee is believed due at this time.

3. GENERAL AUTHORIZATION: Please charge any additional fees or credit overpayment to Deposit Account No. 13-2490. A duplicate copy of this sheet is enclosed.

4. CERTIFICATE OF MAILING UNDER 37 CFR § 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1 hereinabove, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450 on 12-4-06 2006.

By :

  
Lisa M.W. Hillman  
Reg. No. 43,673

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( MBHB Case No. 02-728-B (400.120) )

PATENT

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McSwiggen, James A.	)	
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Of Alzheimer's Disease Using Short	)	
Interfering Nucleic Acid	)	

**THIRD SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Dear Sir:

Pursuant to 37 C.F.R. Section 1.97 - 1.99, the Applicant wishes to make the following references of record in the above-identified application. This Third Supplemental Information Disclosure Statement is in compliance with the continuing duty of candor as set forth in 37 C.F.R. Section 1.56. A partial recitation of the priority claim is as follows. This application is a continuation-in-part of USSN 10/444,853, filed May 23, 2003. This application is also a continuation-in-part of USSN 09/930,423, filed August 15, 2001 and a continuation-in-part of International Patent Application No. PCT/US03/04710, filed February 18, 2003, which is a continuation-in-part of USSN 10/205,309, filed July 25, 2002. All of the applications recited herein are relied upon for an earlier filing date under 35 U.S.C. §120. In accordance with Rule 37 CFR §1.98(d), all references have been previously cited and submitted to the Patent and Trademark Office with prior applications and no references are enclosed herein.

Portions of the listed references may be material to the Examiner's consideration of the presently pending claims. This statement is not a representation that the listed references have

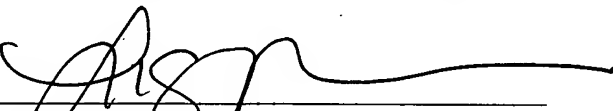
effective dates early enough to be "prior art" within the meaning of 35 U.S.C. Section 102 or Section 103.

Applicants do not believe any fee is due with this submission. If this belief is in error and the Patent Office determines that the fee prescribed in the relevant portion of 37 C.F.R. Section 1.97 is applicable, the undersigned attorney by his signature hereby authorizes any such fee to be debited from Deposit Account 13-2490.

Respectfully submitted,  
**McDonnell Boehnen Hulbert & Berghoff LLP**

Date: 12-4

2006 By:

  
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FORM PTO-1449  
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U.S. Department of Commerce  
Patent and Trademark Office

Atty. Docket No.

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Serial No.

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**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use several sheets if necessary)

**Applicant:**  
McSwiggen et al.

**Filing Date:**  
June 27, 2003

**Group:**  
1645

**U.S. PATENT APPLICATION DOCUMENTS**

Examiner Initial		Document Number	Filing Date	Name	Class	Subclass	Publication Date if Appropriate
	*	08/975,238	06/19/01	Matulic-Adamic et al.			
	*	09/301,511	04/28/99	Beigleman et al.			
	*	09/740,332	12/18/00	Blatt et al.			
	*	09/800,594	03/06/01	Usman and McSwiggen			
	*	10/151,116	05/17/02	Matulic-Adamic et al.			
	*	10/417,012	04/16/03	McSwiggen et al.			
	*	10/422,704	04/24/03	McSwiggen et al.			
	*	10/607,933	06/27/03	McSwiggen et al.			
	*	10/652,791	08/29/03	McSwiggen et al.			
	*	10/693,059	10/23/03	McSwiggen et al.			
	*	10/720,448	11/24/03	McSwiggen et al.			
	*	10/727,780	12/03/03	Vaish et al.			
	*	10/757,803	01/14/04	McSwiggen et al.			
	*	10/780,447	02/13/04	Vargeese et al.			
	*	10/826,966	04/16/04	McSwiggen et al.			
	*	60/292,217	05/18/01	Adamic et al.			
	*	60/306,883	07/20/01	Vargeese et al.			

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	*	60/311,865	08/13/01	Vargeese et al.			
	*	60/543,480	02/10/04	Jadhavi et al.			
	*	US 2001/0007666	01/05/99	Hoffman et al.			07/12/01
	*	US 2002/0130430	12/29/00	Caster			09/19/02
	*	US 2002/0137210	08/09/01	Churikov			09/26/02

**U.S. PATENT DOCUMENTS**

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	*	4,987,071	01/22/91	Cech et al.			
	*	5,108,921	04/28/92	Low et al.			
	*	5,138,045	08/11/92	Vargeese et al.			
	*	5,214,136	05/25/93	Lin et al.			
	*	5,416,016	05/16/95	Low et al.			
	*	5,589,332	12/31/96	Shih et al.			
	*	5,631,359	05/20/97	Chowrira et al.			
	*	5,672,695	09/30/97	Eckstein et al.			
	*	5,741,679	04/21/98	George et al.			
	*	5,834,186	11/10/98	George et al.			
	*	5,849,902	12/15/98	Arrow et al.			

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	*	5,871,914	02/16/99	Nathan et al.			
	*	5,989,912	11/23/99	Arrow et al.			
	*	6,153,737	11/28/00	Manoharan et al.			
	*	6,168,778	01/02/01	Janjic et al.			
	*	6,180,613	01/30/01	Kaplitt et al.			
	*	6,235,310	05/22/01	Wang et al.			
	*	6,235,886	05/22/01	Manoharan et al.			
	*	6,335,434	01/01/02	Guzaev et al.			
	*	6,350,934	02/26/02	Zwick et al.			
	*	6,395,713	05/28/02	Beigelman et al.			
	*	6,528,631	03/04/03	Cook et al.			
	*	6,586,524	07/01/03	Sagara			
	*	6,617,156	09/09/03	Doucette-Stamm et al.			

**FOREIGN PATENT DOCUMENTS**

		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No

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*	2001240375 (Old Application No. 40375/01)	03/16/01	AU (Graham et al.)				
*	0 360 257	02/28/90	EP (Hampel et al.)				
*	1144623 B1	01/29/02	EP (Kreutzer et al.)				
*	88/09810	12/15/88	WO (Tullis et al.)				
*	90/12096	10/18/90	WO (Low et al.)				
*	91/03162	03/21/91	WO (Rossi et al.)				
*	95/11304	04/27/95	WO (Usman et al.)				
*	96/18736	06/20/96	WO (Beigelman et al.)				
*	96/22689	08/01/96	WO (Pyle et al.)				
*	98/27104	06/25/98	WO (Breaker et al.)				
*	98/28317	07/02/98	WO (Matulic-Adamic et al)				
*	98/43993	10/08/98	WO (Breaker et al.)				
*	98/58058	12/23/98	WO (Ludwig & Sproat)				
*	99/04819	02/04/99	WO (Klimuk)				
*	99/05094	02/04/99	WO (Beigelman et al.)				
*	99/16871	04/08/99	WO (Eckstein et al.)				
*	99/17120	04/08/99	WO (Davis and Bishop)				
*	99/29842	06/17/99	WO (Sullenger et al.)				
*	99/32619	07/01/99	WO (Fire et al.)				

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*	99/49029	09/30/99	WO (Graham et al.)				
*	99/53050	10/21/99	WO (Waterhouse et al.)				
*	99/54459	10/28/99	WO (Thompson et al.)				
*	99/55857	11/04/99	WO (Beigelman et al.)				
*	99/66063	12/23/99	WO (Manoharan et al.)				
*	00/03683	01/27/00	WO (Boey et al.)				
*	00/24931	05/04/00	WO (Nathan and Ellington)				
*	00/26226	05/11/00	WO (Breaker et al.)				
*	02/087541	11/07/02	WO (MacLachlan)				
*	2002/094185 (PCT/US02/15876)	11/28/02	WO (Beigelman et al.)				
*	2003/024420	03/27/03	WO (Ahlheim et al.)				
*	2003/064625	08/07/03	WO (Woolf et al.)				
*	2003/064626	08/07/03	WO (Woolf et al.)				
*	2003/070895 (PCT/US03/04710)	08/28/03	WO (McSwiggen et al.)				
*	2003/070918 (PCT/US03/05346)	08/28/03	WO (McSwiggen et al.)				
*	2003/074654 (PCT/US03/05028)	09/12/03	WO (McSwiggen et al.)				
*	2004/013280	02/12/04	WO (Davidson et al.)				
*	PCT/US04/016390	05/24/04	WO (McSwiggen et al.)				

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**OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).**

*	Abramovitz et al., "Catalytic Role of 2'-Hydroxyl Groups Within a Group II Intron Active Site," <u>Science</u> 271:1410-1413 (1996)
*	Adah et al., "Chemistry and Biochemistry of 2',5'-Oligoadenylate-Based Antisense Strategy," <u>Current Medicinal Chemistry</u> , 8, 1189-1212 (2001)
*	Antopolsky et al., "Peptide-Oligonucleotide Phosphorothioate Conjugates with Membrane Translocation and Nuclear Localization Properties," <u>Bioconjugate Chem.</u> 10:598-606 (1999)
*	Arap et al., "Cancer Treatment by Targeted Drug Delivery to Tumor Vasculature in a Mouse Model," <u>Science</u> 279:377-380 (1998)
*	Banerjee and Turner, "The Time Dependence of Chemical Modification Reveals Slow Steps in the Folding of a Group I Ribozyme," <u>Biochemistry</u> 34:6504-6512 (1995)
*	Bannai et al., "Effect of Injection of Antisense of Oligodeoxynucleotides of GAD Isozymes into Rat Ventromedial Hypothalamus on Food Intake and Locomotor Activity," <u>Brain Research</u> 784:305-315 (1998)
*	Bannai et al., "Water-absorbent Polymer as a Carrier for a Discrete Deposit of Antisense Oligodeoxynucleotides in the Central Nervous System," <u>Brain Research Protocols</u> 3:83-87 (1998)
*	Bartel and Szostak, "Isolation of New Ribozymes from a Large Pool of Random Sequences," <u>Science</u> 261:1411-1418 (1993)
*	Bass, "Double-Stranded RNA as a Template for Gene Silencing," <u>Cell</u> , 101, 235-238 (2000)
*	Beaudry and Joyce, "Directed Evolution of an RNA Enzyme," <u>Science</u> 257:635-641 (1992)
*	Bellon et al., "Amino-Linked Ribozymes: Post-Synthetic Conjugation of Half-Ribozymes," <u>Nucleosides &amp; Nucleotides</u> 16:951-954 (1997)
*	Berzal-Herranz et al., "Essential nucleotide sequences and secondary structure elements of the hairpin ribozyme," <u>EBMO J.</u> 12:2567-2574 (1993)

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*	Bettinger et al., "Size Reduction of Galactosylated PEI/DNA Complexes Improves Lectin-Mediated Gene Transfer into Hepatocytes," <i>Bioconjugate Chem.</i> , 10, 558-561 (1999)
*	Bevilacqua et al., "A Mechanistic Framework for the Second Step of Splicing Catalyzed by the <i>Tetrahymena</i> Ribozyme," <i>Biochemistry</i> 35:648-568 (1996)
*	Bongartz et al., "Improved biological activity of antisense oligonucleotides conjugated to a fusogenic peptide," <i>Nucleic Acids Research</i> 22:4681-4688 (1994)
*	Bonora et al., "Biological Properties of Antisense Oligonucleotides Conjugated to Different High-Molecular Mass Poly(ethylen glycols)," <i>Nucleosides &amp; Nucleotides</i> 18:1723-1725 (1999)
*	Bonora et al., "Synthesis and Characterization of High-Molecular Mass Polyethylene Glycol-Conjugated Oligonucleotides," <i>Bioconjugate Chem.</i> 8:793-797 (1997)
*	Breaker and Joyce, "Inventing and improving ribozyme function: rational design versus iterative selection methods," <i>TIBTECH</i> 12:268-275 (1994)
*	Breaker et al., "A DNA enzyme with Mg <sup>2+</sup> -dependent RNA phosphoesterase activity," <i>Chemistry &amp; Biology</i> 2(10):655-660 (1995)
*	Breaker, "Are engineered proteins getting competition from RNA?" <i>Current Opinion in Biotechnology</i> 7:442-448 (1996)
*	Breaker, "Catalytic DNA: in training and seeking employment," <i>Nature Biotechnology</i> 17:422-423 (1999)
*	Broaddus et al., "Distribution and stability of antisense phosphorothioate oligonucleotides in rodent brain following direct intraparenchymal controlled-rate infusion," <i>Neurosurg. Focus</i> 3(5):Article 4 (1997)
*	Broaddus et al., "Distribution and stability of antisense phosphorothioate oligonucleotides in rodent brain following direct intraparenchymal controlled-rate infusion," <i>J Neurosurg</i> 88:734-742 (1998)
*	Buckwold et al., "Effects of a Naturally Occurring Mutation in the Hepatitis B Virus Basal Core Promoter on Precore Cene Expression and Viral Replication," <i>Journal of Virology</i> , 5845-5851 (1996)

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*	Burger et al., "Experimental Corneal Neovascularization: Biomicroscopic, Angiographic, and Morphologic Correlation," <i>Cornea</i> 4:35-41 (1985/1986)
*	Cebon et al., "New DNA Modification Strategies Involving Oxime Formation," <i>Aust. J. Chem.</i> 53:333-339 (2000)
*	Cech, "Ribozymes and Their Medical Implications," <i>JAMA</i> 260:3030-3034 (1988)
*	Chaloin et al., "Design of Carrier Peptide-Oligonucleotide Conjugates With Rapid Membrane Translocation and Nuclear Localization Properties," <i>BBRC</i> 243:601-608 (1998)
*	Chartrand et al., "An oligodeoxyribonucleotide that supports catalytic activity in the hammerhead ribozyme domain," <i>Nucleic Acids Research</i> 23(20):4092-4096 (1995)
*	Chiu et al., "siRNA function in RNAi: A chemical modification analysis," <i>RNA</i> , 9:1034-1048 (2003)
*	Choi et al., "Effect of Poly(ethylene glycol) Grafting on Polyethylenimine as a Gene Transfer Vector <i>in vitro</i> ," <i>Bull. Korean Chem. Soc.</i> , 22, 46-52 (2001)
*	Chowrira et al., "Novel guanosine requirement for catalysis by the hairpin ribozyme," <i>Nature</i> 354:320-322 (1991)
*	Chun et al., "Effect of infusion of vasoactive intestinal peptide (VIP)-antisense oligodeoxynucleotide into the third cerebral ventricle above the hypothalamic cuprachiasmatic nucleus on the hyperglycemia caused by intracranial injection of 2-deoxy-D-glucose in rats," <i>Neuroscience Letters</i> 257:135-138 (1998)
*	Clemens et al., "The Double-Stranded RNA-Dependent Protein Kinase PKR: Structure and Function," <i>Journal of Interferon and Cytokine Research</i> , 17:503-524 (1997)
*	Cole et al., "Activation of RNase L by 2',5'-Oligoadenylates," <i>The Journal of Biological Chemistry</i> , 272:31, 19187-19192 (1997)
*	Collins and Olive, "Reaction Conditions and Kinetics of Self-Cleavage of a Ribozyme Derived From <i>Neurospora</i> VS RNA," <i>Biochemistry</i> 32:2795-2799 (1993)

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*	Cook, Dan P., "Medicinal Chemistry of Antisense Oligonucleotides," <i>Antisense Drug Technologies: Principles, Strategies, and Applications</i> (ed. Crooke, S.T.), Marcel Dekker, New York (2001)
*	Crooke, "Advances in Understanding the Pharmacological Properties of Antisense Oligonucleotides," <i>Advances in Pharmacology</i> 40:1-49 (1997)
*	Crooke, "Antisense Therapeutics," <i>Biotechnology and Genetic Engineering Reviews</i> 15:121-157 (1998)
*	Crooke, "Progress in Antisense Technology: The End of the Beginning," <i>Methods in Enzymology</i> 313:3-45 (1999)
*	d'Aldin et al., "Antisense oligonucleotides to the GluR2 AMPA receptor subunit modify excitatory synaptic transmission in vivo," <i>Molecular Brain Research</i> 55:151-164 (1998)
*	Daniels et al., "Two Competing Pathways for Self-splicing by Group II Introns: A Quantitative Analysis of <i>in Vitro</i> Reaction Rates and Products," <i>J. Mol. Biol.</i> 256:31-49 (1996)
*	Defrancq and Lhomme, "Use of an Aminooxy Linker for the Functionalization of Oligodeoxyribonucleotides," <i>Bioorganic &amp; Medicinal Chem. Lett.</i> 11:931-933 (2001)
*	Delihias et al., "Natural antisense RNA/target RNA interactions: Possible models for antisense oligonucleotide drug design," <i>Nature Biotechnology</i> 15:751-753 (1997)
*	Diebold et al., "Mannose Polyethylenimine Conjugates for Targeted DNA Delivery into Dendritic Cells*," <i>The Journal of Biological Chemistry</i> , 274, 19087-19094 (1999)
*	Dryden et al., "The lack of specificity of neuropeptide Y (NPY) antisense oligodeoxynucleotides administered intracerebroventricularly in inhibiting food intake and NPY gene expression in the rat hypothalamus," <i>Journal of Endocrinology</i> 157:169-175 (1998)
*	Duval-Valentin, "Specific inhibition of transcription by triple helix-forming oligonucleotides," <i>Proc. Natl. Acad. Sci. USA</i> 89:504-508 (1992)
*	Egholm et al., "PNA hybridizes to complementary oligonucleotides obeying the Watson-Crick hydrogen-bonding rules," <i>Nature</i> 365:566-568 (1993)

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----------	-----------------

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*	Elbashir et al., "Analysis of gene function in somatic mammalian cells using small interfering RNAs," <i>Methods</i> , 26:199-213 (2002)
*	Epa et al., "Downregulation of the p75 Neurotrophin Receptor in Tissue Culture and <i>In Vivo</i> , Using $\beta$ -Cyclodextrin-Adamantane-Oligonucleotide Conjugates," <i>Antisense and Nucleic Acid Drug Dev.</i> 10:469-478 (2000)
*	Erbacher et al., "Transfection and physical properties of various sacccharide, poly(ethylene glycol), and antibody-derivatized polyethylenimines (PEI), <i>The Journal of Gene Medicine</i> , 1, 210-222 (1999) [sometimes incorrectly cited as pages 1-18]
*	European Patent Office Examination Report dated May 5, 2004 for Application No. GB0404907.8
*	European Patent Office Examination Report dated September 29, 2004 for Application No. GB0404907.8
*	Feldstein et al., "Two sequences participating in the autolytic processing of satellite tobacco ringspot virus complementary RNA," <i>Gene</i> 82:53-61 (1989)
*	Filion and Phillips, "Toxicity and immunomodulatory activity of liposomal vectors formulated with cationic lipids toward immune effector cells," <i>Biochimica et Biophysica Acta</i> 1329:345-356 (1997)
*	Findeis, "Stepwise Synthesis of a GalNAc-containing Cluster Glycoside Ligand of the Asialoglycoprotein Receptor," <i>Int. J. Peptide Protein Res.</i> 43:477-485 (1994)
*	Fire et al., "Potent and Specific Genetic Interference by Double-Stranded RNA in <i>Caenorhabditis Elegans</i> ," <i>Nature</i> , 391:806-811 (1998)
*	Forster and Altman, "External Guide Sequences for an RNA Enzyme," <i>Science</i> 249:783-786 (1990)
*	Fox, "Targeting DNA with Triplexes," <i>Current Medicinal Chemistry</i> 7:17-37 (2000)
*	Freier et al., "The ups and downs of nucleic acid duplex stability: structure-stability studies on chemically-modified DNA:RNA duplexes," <i>Nucleic Acids Research</i> , 25(22):4429-4443 (1997)

EXAMINER	DATE CONSIDERED
----------	-----------------

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(Use several sheets if necessary)

**Applicant:**

McSwiggen et al.

**Filing Date:**

June 27, 2003

**Group:**

1645

*	Furgeson et al., "Modified Linear Polyethylenimine—Cholesterol Conjugates for DNA Complexation," <i>Bioconjugate Chem.</i> , 14, 840-847 (2003)
*	Games et al., "Alzheimer-Type Neuropathology in Transgenic Mice Overexpressing V717F $\beta$ -Amyloid Precursor Protein," <i>Nature</i> 373:523-527 (1995)
*	Genbank Accession No. AB020693 dated January 10, 2004
*	Genbank Accession No. AB050436 dated July 17, 2001
*	Genbank Accession No. AB050437 dated July 17, 2001
*	Genbank Accession No. AB050438 dated July 17, 2001
*	Genbank Accession No. AB066441 dated June 29, 2004
*	GenBank Accession No. AF037412 dated October 8, 1998
*	Genbank Accession No. AF063658 dated May 16, 1998
*	Genbank Accession No. AF100308.1 dated March 3, 1999
*	Genbank Accession No. AF168956 dated August 5, 1999
*	Genbank Accession No. AF178532 dated September 21, 2000
*	Genbank Accession No. AF188276 dated September 21, 2000
*	Genbank Accession No. AF188277 dated September 21, 2000
*	Genbank Accession No. AF190725 dated October 26, 1999
*	Genbank Accession No. AF201468 dated December 19, 1999
*	Genbank Accession No. AF282245 dated May 4, 2004
*	Genbank Accession No. AF324837 dated March 23, 2004
*	Genbank Accession No. AF338816 dated May 21, 2002
*	Genbank Accession No. AF338817 dated May 21, 2002
*	Genbank Accession No. AF527782 dated August 4, 2002
*	Genbank Accession No. AJ430458 dated March 15, 2002
*	Genbank Accession No. AK075049 dated January 20, 2006
*	Genbank Accession No. BC018937 dated September 9, 2005

EXAMINER

DATE CONSIDERED

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		<b>Filing Date:</b> June 27, 2003	<b>Group:</b> 1645

*	Genbank Accession No. BC065529 dated July 15, 2006
*	GenBank Accession No. D00239 dated February 1, 2000
*	Genbank Accession No. D11168 dated February 1, 2000
*	GenBank Accession No. D50483.1 dated February 10, 2000
*	Genbank Accession No. D87675 dated April 14, 2000
*	Genbank Accession No. E14707 dated November 5, 2005
*	Genbank Accession No. K02121 dated January 2, 2001
*	GenBank Accession No. L24917 dated July 14, 1995
*	Genbank Accession No. L38318 dated November 21, 1995
*	GenBank Accession No. M16248 dated February 7, 2003
*	Genbank Accession No. M31724 dated January 8, 1995
*	GenBank Accession No. NC_001345 dated October 5, 2005
*	Genbank Accession No. NC_001347 dated April 7, 2006
*	GenBank Accession No. NC_001353 dated June 26, 2005
*	Genbank Accession No. NC_001563 dated May 31, 2006
*	GenBank Accession No. NC_001781 dated March 30, 2006
*	Genbank Accession No. NC_004718 dated July 21, 2006
*	Genbank Accession No. NM_000447 dated March 19, 2006
*	Genbank Accession No. NM_000484 dated July 16, 2006
*	Genbank Accession No. NM_001285 dated July 20, 2006
*	GenBank Accession No. NM_001982 dated April 16, 2006
*	Genbank Accession No. NM_002592.1 dated April 7, 2003
*	GenBank Accession No. NM_002667 dated March 26, 2006
*	Genbank Accession No. NM_002737 dated July 23, 2006

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----------	-----------------

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McSwiggen et al.

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1645

*	GenBank Accession No. NM_003219 dated June 18, 2006
*	Genbank Accession No. NM_003376 dated July 23, 2006
*	Genbank Accession No. NM_004283 dated October 17, 2005
*	Genbank Accession No. NM_004448 dated July 23, 2006
*	Genbank Accession No. NM_005228 dated July 23, 2006
*	Genbank Accession No. NM_005235 dated July 28, 2006
*	Genbank Accession No. NM_006222 dated August 23, 2004
*	Genbank Accession No. NM_007319 dated April 23, 2006
*	Genbank Accession No. NM_012104 dated July 23, 2006
*	Genbank Accession No. NM_012105 dated March 19, 2006
*	Genbank Accession No. NM_012486 dated March 19, 2006
*	Genbank Accession No. NM_138971 dated July 23, 2006
*	Genbank Accession No. NM_138972 dated July 23, 2006
*	Genbank Accession No. NM_138973 dated July 23, 2006
*	Genbank Accession No. NM_138991 dated March 19, 2006
*	Genbank Accession No. NM_138992 dated March 19, 2006
*	Genbank Accession No. NM_201413 July 16, 2006
*	Genbank Accession No. NM_201414 dated July 16, 2006
*	Genbank Accession No. S60099 dated July 23, 2006
*	Genbank Accession No. S82227 dated December 16, 2002
*	Genbank Accession No. U50939 dated May 16, 1996
*	Genbank Accession No. U51188 dated July 7, 2004
*	Genbank Accession No. U86046 dated February 8, 2002
*	Genbank Accession No. X01087 dated February 9, 1999

EXAMINER

DATE CONSIDERED

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*	Genbank Accession No. X02316 dated August 5, 2004
*	Genbank Accession No. X06989 dated January 9, 2003
*	Genbank Accession No. X07203 dated September 12, 1993
*	Genbank Accession No. X60667 dated April 18, 2005
*	Genbank Accession No. XM_015620 dated February 7, 2002
*	Genbank Accession No. XM_033884 dated August 1, 2002
*	Genbank Accession No. XM_067723 dated April 28, 2003
*	Genbank Accession No. Y00264 dated September 12, 1993
*	Ghirnikar et al., "Chemokine inhibition in rat stab wound brain injury using antisense oligodeoxynucleotides," <i>Neuroscience Letters</i> 247:21-24 (1998)
*	Godbey et al., "Poly(ethylenimine) and its role in gene delivery," <i>Journal of Controlled Release</i> , 60, 149-160 (1999)
*	Godbey et al., "Tracking the intracellular path of poly(ethylenimine)/DNA complexes for gene delivery," <i>Proc. Natl. Acad. Sci. USA</i> , 96, 5177-5181 (1999)
*	Godwin et al., "The Synthesis of Biologically Active Pteroyl oligo- $\gamma$ -L-Glutamates (Folic Acid Conjugates)," <i>The Journal of Biological Chemistry</i> 247:2266-2271 (1972)
*	Gold et al., "Diversity of Oligonucleotide Functions," <i>Annu. Rev. Biochem.</i> 64:763-797 (1995)
*	Gold, "Axonal Regeneration of Sensory Nerves is Delayed by Continuous Intrathecal Infusion of Nerve Growth Factor," <i>Neuroscience</i> 76:1153-1158 (1997)
*	Grant et al., "Insulin-like growth factor I acts as an angiogenic agent in rabbit cornea and retina: comparative studies with basic fibroblast growth factor," <i>Diabetologia</i> 36:282-291 (1993)
*	Grasby et al., "Purine Functional Groups in Essential Residues of the Hairpin Ribozyme Required for Catalytic Cleavage of RNA," <i>Biochemistry</i> 34:4068-4076 (1995)

EXAMINER	DATE CONSIDERED
----------	-----------------

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		<b>Applicant:</b> McSwiggen et al.	
		<b>Filing Date:</b> June 27, 2003	<b>Group:</b> 1645

*	Griffin et al., "Group II intron ribozymes that cleave DNA and RNA linkages with similar efficiency, and lack contacts with substrate 2'-hydroxyl groups," <u>Chemistry &amp; Biology</u> 2:761-770 (1995)
*	Groothuis and Levy, "The entry of antiviral and antiretroviral drugs into the central nervous system," <u>Journal of NeuroVirology</u> , 3:387-400 (1997)
*	Guerrier-Takada et al., "The RNA Moiety of Ribonuclease P Is the Catalytic Subunit of the Enzyme," <u>Cell</u> 35:849-857 (1983)
*	Guo and Collins, "Efficient <i>trans</i> -cleavage of a stem-loop RNA substrate by a ribozyme derived from <i>Neurospora</i> VS RNA," <u>EMBO J.</u> 14:368-376 (1995)
*	Habus et al., "A Mild and Efficient Solid-Support Synthesis of Novel Oligonucleotide Conjugates," <u>Bioconjugate Chem.</u> 9:283-291 (1998)
*	Hammann et al., "Length Variation of Helix III in a Hammerhead Ribozyme and Its Influence on Cleavage Activity," <u>Antisense &amp; Nucleic Acid Drug Development</u> 9:25-31 (1999)
*	Hampel and Tritz, "RNA Catalytic Properties of the Minimum (-)sTRSV Sequence," <u>Biochemistry</u> 28:4929-4933 (1989)
*	Hampel et al., "'Hairpin' Catalytic RNA Model: Evidence for Helices and Sequence Requirement for Substrate RNA," <u>Nucleic Acids Research</u> 18:299-304 (1990)
*	Harborth et al., "Identification of essential genes in cultured mammalian cells using small interfering RNAs," <u>Journal of Cell Science</u> , 114:4557-4565 (2001)
*	Harborth et al., "Sequence, Chemical, and Structural Variation of Small Interfering RNAs and Short Hairpin RNAs and the Effect on Mammalian Gene Silencing," <u>Antisense and Nucleic Acid Drug Development</u> , 13:83-105 (2003)
*	Harris et al., "Identification of phosphates involved in catalysis by the ribozyme RNase P RNA," <u>RNA</u> 1:210-218 (1995)
*	Hartmann et al., "Spontaneous and Cationic Lipid-Mediated Uptake of Antisense Oligonucleotides in Human Monocytes and Lymphocytes," <u>The Journal of Pharmacology and Experimental Therapeutics</u> 285:920-928 (1998)

EXAMINER	DATE CONSIDERED
----------	-----------------

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(Use several sheets if necessary)

**Applicant:**

McSwiggen et al.

**Filing Date:**

June 27, 2003

**Group:**

1645

*	Haseloff and Gerlach, "Sequences required for self-catalysed cleavage of the satellite RNA of tobacco ringspot virus," <u>Gene</u> 82:43-52 (1989)
*	Hegg et al., "Kinetics and Thermodynamics of Intermolecular Catalysis by Hairpin Ribozymes," <u>Biochemistry</u> 34:15813-15828 (1995)
*	Herschlag and Cech, "Catalysis of RNA Cleavage by the <i>Tetrahymena thermophila</i> Ribozyme 1. Kinetic Description of the Reaction of an RNA Substrate Complementary to the Active Site," <u>Biochemistry</u> 29:10159-10171 (1990)
*	Herschlag and Cech, "Catalysis of RNA Cleavage by the <i>Tetrahymena thermophila</i> Ribozyme. 2. Kinetic Description of the Reaction of an RNA Substrate That Forms a Mismatch at the Active Site," <u>Biochemistry</u> 29:10172-10180 (1990)
*	Hertel et al., "A Kinetic Thermodynamic Framework for the Hammerhead Ribozyme Reaction," <u>Biochemistry</u> 33:3374-3385 (1994)
*	Hertel et al., "Numbering System for the Hammerhead," <u>Nucleic Acids Research</u> 20:3252 (1992)
*	Hofland and Huang, "Formulation and Delivery of Nucleic Acids," <u>Handbook of Exp. Pharmacol.</u> 137:165-192 (1999)
*	Hudson et al., "Cellular Delivery of Hammerhead Ribozymes Conjugated to a Transferrin Receptor Antibody," <u>Int'l Jour. of Pharmaceutics</u> 182:49-58 (1999)
*	International Search Report for PCT/US03/18911 mailed November 19, 2003
*	Ishizaka et al., "Isolation of Active Ribozymes from an RNA Pool of Random Sequences Using an Anchored Substrate RNA," <u>Biochemical and Biophysical Research Communication</u> 214(2):403-409 (1995)
*	Jarvis et al., "Optimizing the Cell Efficacy of Synthetic Ribozymes," <u>Journal of Biological Chemistry</u> 271:29107-29112 (1996)
*	Jaschke et al., "Synthesis and Properties of Oligodeoxyribonucleotide-polyethylene Glycol Conjugates," <u>Nucleic Acids Research</u> 22:4810-4817 (1994)
*	Jaschke, "Oligonucleotide-Poly(ethylene glycol) Conjugates: Synthesis, Properties, and Application," <u>American Chemical Society</u> 680:265-283 (1997)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

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	Applicant:					
	McSwiggen et al.					
Filing Date:		Group:				
June 27, 2003		1645				

*	Joseph et al., "Substrate selection rules for the hairpin ribozyme determined by in vitro selection, mutation, and analysis of mismatched substrates," <u>Genes &amp; Development</u> 7:130-138 (1993)
*	Joyce et al., "Amplification, mutation and selection of catalytic RNA," <u>Gene</u> 82:83-87 (1989)
*	Joyce, "Directed Molecular Evolution," <u>Scientific American</u> 267:90-97 (1992)
*	Karle et al., "Differential Changes in Induced Seizures After Hippocampal Treatment of Rats with an Antisense Oligodeoxynucleotide to the GABA <sub>A</sub> Receptor $\gamma 2$ Subunit," <u>Euro. Jour. of Pharmacology</u> 340:153-160 (1997)
*	Kim et al., "Inhibition of vascular endothelial growth factor-induced angiogenesis suppresses tumour growth in vivo," <u>Nature</u> 362:841-844 (1993)
*	Knitt et al., "pH Dependencies of the <i>Tetrahymena</i> Ribozyme Reveal an Unconventional Origin of an Apparent $pK_a$ ," <u>Biochemistry</u> 35:1560-1570 (1996)
*	Koch et al., "Vascular Endothelial Growth Factor," <u>Journal of Immunology</u> , 152:4149-4156 (1994)
*	Kore, et al., "Sequence specificity of the hammerhead ribozyme revisited; the NIH rule," <u>Nucleic Acids Research</u> , 26(18):4116-4120 (1998).
*	Krichevsky et al., "5 miRNAs in the brain and the application of RNAi to neurons," <u>RNA Interference Technology</u> , Ed. Appasani, K., Cambridge University Press, 84-100 (2005)
*	Kronenwett et al., "Oligodeoxyribonucleotide Uptake in Primary Human Hematopoietic Cells is Enhanced by Cationic Lipids and Depends on the Hematopoietic Cell Subset," <u>Blood</u> 91:852-862 (1998)
*	Kumar and Ellington, "Artificial evolution and natural ribozymes," <u>FASEB J.</u> 9:1183-1195 (1995)
*	Kunath et al., "The structure of PEG-modified poly(ethylene imines) influences biodistribution and pharmacokinetics of their complexes with NF-kappaB decoy in mice.," <u>Medline (Pharm Res.)</u> 19(6): 810-817 (6/1/2002)

EXAMINER	DATE CONSIDERED
----------	-----------------

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*	Kuwabara et al., "Allosterically Controllable Ribozymes with Biosensor Functions," <u>Current Opinion in Chem. Biol.</u> 4:669-677 (2000)
*	Lee et al., "Enhancing the Catalytic Repertoire of Nucleic Acids: A Systematic Study of Linker Length and Rigidity," <u>Nucleic Acids Research</u> 29:1565-1573 (2001)
*	Lendlein et al., "Biodegradable, Elastic Shape-Memory Polymers for Potential Biomedical Applications," <u>Science</u> , 296, 1673-1676 (2002)
*	Lepri et al., "Effect of Low Molecular Weight Heparan Sulphate on Angiogenesis in the Rat Cornea after Chemical Cauterization," <u>Journal of Ocular Pharmacology</u> 10:273-281 (1994)
*	Li and Altman, "Cleavage by RNase P of gene N mRNA reduces bacteriophage $\lambda$ burst size," <u>Nucleic Acids Research</u> 24:835-842 (1996)
*	Li et al., "Thermodynamic and Activation Parameters for Binding of a Pyrene-Labeled Substrate by the <i>Tetrahymena</i> Ribozyme: Docking is Not Diffusion-Controlled and is Driven by a Favorable Entropy Change," <u>Biochemistry</u> 34:14394-14399 (1995)
*	Lichner et al., "Double-stranded RNA-binding proteins could suppress RNA interference-mediated antiviral defences," <u>Journal of General Virology</u> , 84, 975-980 (2003)
*	Lindgren et al., "Translocation Properties of Novel Cell Penetrating Transportan and Penetratin Analogues," <u>Bioconjugate Chem.</u> 11:619-626 (2000)
*	Lisacek et al., "Automatic Identification of Group I Intron Cores in Genomic DNA Sequences," <u>J. Mol. Biol.</u> 235:1206-1217 (1994)
*	Liu et al., "Hydrodynamics-based transfection in animals by systemic administration of plasmid DNA," <u>Gene Therapy</u> , 6, 1258-1266 (1999)
*	Long and Uhlenbeck, "Kinetic characterization of intramolecular and intermolecular hammerhead RNAs with stem II deletions," <u>Proc. Natl. Acad. Sci. USA</u> 91:6977-6981 (1994)
*	Maher et al., "Kinetic Analysis of Oligodeoxyribonucleotide-Directed Triple-Helix Formation on DNA," <u>Biochemistry</u> 29:8820-8826 (1990)

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.



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(Use several sheets if necessary)

**Applicant:**

McSwiggen et al.

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**Group:**

1645

*	Matulic-Adamic et al., "Functionalized Nucleoside 5'-triphosphates for In Vitro Selection of New Catalytic Ribonucleic Acids," <u>Bioorganic &amp; Medicinal Chemistry Letters</u> 10:1299-1302 (2000)
*	McKay, "Structure and function of the hammerhead ribozyme: an unfinished story," <u>RNA</u> 2:395-403 (1996)
*	Michel and Westhof, "Slippery substrates," <u>Nat. Struct. Biol.</u> 1:5-7 (1994)
*	Michel et al., "Structure and Activities of Group II Introns," <u>Annu. Rev. Biochem.</u> 64:435-461 (1995)
*	Michels and Pyle, "Conversion of a Group II Intron into a New Multiple-Turnover Ribozyme that Selectively Cleaves Oligonucleotides: Elucidation of Reaction Mechanism and Structure/Function Relationships," <u>Biochemistry</u> 34:2965-2977 (1995)
*	Miller et al., "Antisense Oligonucleoside Methoxyphosphonates and their Derivatives," <u>Nucleosides &amp; Nucleotides</u> , 10(1-3), 37-46 (1991)
*	Milner et al., "Selecting effective antisense reagents on combinatorial oligonucleotide arrays," <u>Nature Biotechnology</u> 15:537-541 (1997)
*	Mohr et al., "A tyrosyl-tRNA synthetase can function similarly to an RNA structure in the <i>Tetrahymena</i> ribozyme," <u>Nature</u> 370:147-150 (1994)
*	Mori et al., "Pigment epithelium-derived factor inhibits retinal and choroidal neovascularization," <u>Journal of Cellular Physiology</u> , 118(2) 253-263 (2001)
*	Morris et al., "A New Peptide Vector for Efficient Delivery of Oligonucleotides into Mammalian Cells," <u>Nucleic Acids Research</u> 25:2730-2736 (1997)
*	Mullan et al., "A Pathogenic Mutation for Probable Alzheimer's Disease in the APP Gene at the N-Terminus of $\beta$ -Amyloid," <u>Nature Genetics</u> 1:345-347 (1992)
*	Nakamaye and Eckstein, "AUA-Cleaving Hammerhead Ribozymes: Attempted Selection for Improved Cleavage," <u>Biochemistry</u> 33:1271-1277 (1994)
*	Nathans and Smith, "Restriction Endonucleases in the Analysis and Restructuring of DNA Molecules," <u>Ann. Rev. Biochem.</u> 44:273-293 (1975)

EXAMINER

DATE CONSIDERED

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**Group:**

1645

*	Nomura et al., "Development of an Efficient Intermediate, $\alpha$ -[2-(Trimethylsilyl) ethoxy]-2-N-[2-trimethylsilyl]ethoxycarbonyl]folic Acid, for the Synthesis of Folate ( $\gamma$ )-Conjugates, and Its Application to the Synthesis of Folate-Nucleoside Conjugates," <i>J. Org. Chem.</i> 65:5016-5021 (2000)
*	Noviello et al., "Autosomal Recessive Hypercholesterolemia Protein Interacts with and Regulates the Cell Surface Level of Alzheimer's Amyloid $\beta$ Precursor Protein*," <i>The Journal of Biological Chemistry</i> , 278, 31843-31847 (2003)
*	Ohno-Matsui et al., "Inducible Expression of Vascular Endothelial Growth Factor in Adult Mice Causes Severe Proliferative Retinopathy and Retinal Detachment," <i>Am. J. Pathology</i> , 160, 711-719 (2002)
*	O'Reilly et al., "Angiostatin: A Novel Angiogenesis Inhibitor That Mediates the Suppression of Metastases by a Lewis Lung Carcinoma," <i>Cell</i> 79:315-328 (1994)
*	Orgis et al., "DNA/polyethylenimine transfection particles: Influence of ligands, polymer size, and PEGylation on internalization and gene expression," <i>AAPS PharmSci.</i> , 3 (3) article 21 ( <a href="http://www.pharmsci.org">http://www.pharmsci.org</a> ) p. 1- 11 (2001)
*	Ormerod et al., "Effects of Altering the Eicosanoid Precursor Pool on Neovascularization and Inflammation in the Alkali-burned Rabbit Cornea," <i>American Journal of Pathology</i> 137:1243-1252 (1990)
*	Pal-Bhadra et al., "Heterochromatic Silencing and HP1 Localizatin in <i>Drosophila</i> Are Dependent on the RNAi Machinery," <i>Science</i> , 303, 669-672 (2004)
*	Pan et al., "Probing of tertiary interactions in RNA: 2'-Hydroxyl-base contacts between the Rnase P and pre-tRNA," <i>Proc. Natl. Acad. Sci. USA</i> 92:12510-12514 (1995)
*	Pandey et al., "Role ov B61, the Ligand for the Eck Receptor Tyrosine Kinase, in TNF- $\alpha$ -Induced Angiogenesis," <i>Science</i> 268:567-569 (1995)
*	Parrish et al., "Funcational Anatomy of a dsRNA Trigger: Differential Requirement for the Two Trigger Strands in RNA Interference," <i>Molecular Cell</i> , 8:1077-1087 (2000)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

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(Use several sheets if necessary)

**Applicant:**

McSwiggen et al.

**Filing Date:**

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**Group:**

1645

*	Passaniti et al., "A Simple, Quantitative Method for Assessing Angiogenesis and Antiangiogenic Agents Using Reconstituted Basement Membrane, Heparin, and Fibroblast Growth Factor," <i>Laboratory Investigation</i> 67:519-528 (1992)
*	Perrotta and Been, "A pseudoknot-like structure required for efficeint self-cleavage of hepatitis delta virus RNA," <i>Nature</i> 350:434-436 (1991)
*	Perrotta and Been, "Cleavage of Oligoribonucleotides by a Ribozyme Derived from the Hepatitis $\delta$ Virus RNA Sequence," <i>Biochemistry</i> 31:16-21 (1992)
*	Petersen et al., "Polyethylenimine-graft-Poly(ethylene glycol) Copolymers: Influence of Copolymer Block Structure on DNA Complexation and Biological Activities as Gene Delivery System, <i>Bioconjugate Chem.</i> , 13, 845-854 (2002)
*	Pierce et al., "Vascular endothelial growth factor/vascular permeability factor expression in a mouse model of retinal neovascularization," <i>Proc. Natl. Acad. Sci. USA</i> 92:905-909 (1995)
*	Player and Torrence, "The 2-5A System: Modulation of Viral and Cellular Processes Through Acceleration of RNA Degradation," <i>Pharmacol Ther.</i> 78:55-113 (1998)
*	Praseuth et al., "Triple helix formation and the antigene for sequence-specific control of gene expression," <i>Biochimica et Biophysica Acta</i> 1489:181-206 (1999)
*	Puttaraju et al., "A circular trans-acting hepatitis delta virus ribozyme," <i>Nucleic Acids Research</i> 21:4253-4258 (1993)
*	Pyle et al., "Building a Kinetic Framework for Group II Intron Ribozyme Activity: Quantitation of Interdomain Binding and Reaction Rate," <i>Biochemistry</i> 33:2716-2725 (1994)
*	Rait et al., "3'-End Conjugates of Minimally Phosphorothioate-Protected Oligonucleotides with 1-O-Hexadecylglycerol: Synthesis and Anti-ras Activity in Radiation-Resistant Cells," <i>Bioconjugate Chem.</i> , 11:153-160 (2000)
*	Rajakumar et al., "Effects of Intrastratial Infusion of D <sub>2</sub> Receptor Antisense Oligonucleotide on Apomorphine-Induced Behaviors in the Rat," <i>Synapse</i> , 26:199-208 (1997)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.





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		<b>Applicant:</b> McSwiggen et al.	
		<b>Filing Date:</b> June 27, 2003	<b>Group:</b> 1645

*	Randall et al., "Clearance of replicating hepatitis C virus replicon RNAs in cell culture by small interfering RNAs," <i>PNAS</i> , 100, 235-240 (2003)
*	Reynolds et al., "Rational siRNA design for RNA interference," <i>Nature Biotechnology</i> , 22, 3, 326-330 (2004) [also referred to as 1 February 4 2004, doi:10.1038/nbt936]
*	Roberds et al., "BACE knockout mice are healthy despite lacking the primary $\beta$ -secretase activity in brain: implications for Alzheimer's disease therapeutics," <i>Human Molecular Genetics</i> , 10(12):1317-1324 (2001)
*	Robertson et al., "Purification and Properties of a Specific <i>Escherichia coli</i> Ribonuclease which Cleaves a Tyrosine Transfer Ribonucleic Acid Precursor," <i>J. Biol. Chem.</i> 247:5243-5251 (1972)
*	Rossi et al., "Ribozymes as Anti-HIV-1 Therapeutic Agents: Principles, Applications, and Problems," <i>Aids Research and Human Retroviruses</i> 8:183-189 (1992)
*	Ruoslahti, "RGD and Other Recognition Sequences for Integrins," <i>Annu. Rev. Cell Dev. Biol.</i> 12:697-715 (1996)
*	Sabahi et al., "Hybridization of 2'-ribose modified mixed-sequence oligonucleotides: thermodynamic and kinetic studies," <i>Nucleic Acids Research</i> , 29(10):2163-2170 (2001)
*	Salo et al., "Aminooxy Functionalized Oligonucleotides: Preparation, On-Support Derivatization, and Postsynthetic Attachment to Polymer Support," <i>Bioconjugate Chem.</i> 10:815-823 (1999)
*	Sanghvi et al., "Improved Process for the Preparation of Nucleosidic Phosphoramidites Using a Safer and Cheaper Activator," <i>Organic Process Res. &amp; Dev.</i> 4:175-181 (2000)
*	Santoro and Joyce, "A general purpose RNA-cleaving DNA enzyme," <i>Proc. Natl. Acad. Sci. USA</i> 94:4262-4266 (1997)
*	Santoro et al., "Mechanism and Utility of an RNA-Cleaving DNA Enzyme," <i>Biochemistry</i> 37:13330-13342 (1998)
*	Santoro et al., "RNA Cleavage by a DNA Enzyme with Extended Chemical Functionality," <i>J. Am. Chem. Soc.</i> 122:2433-2439 (2000)

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

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*	Saville and Collins, "A Site-Specific Self-Cleavage Reaction Performed by a Novel RNA In <i>Neurospora</i> Mitochondria," <i>Cell</i> 61:685-696 (1990)
*	Saville and Collins, "RNA-Mediated Ligation of Self-Cleavage Products of a <i>Neurospora</i> Mitochondrial Plasmid Transcript," <i>Proc. Natl. Acad. Sci. USA</i> 88:8826-8830 (1991)
*	Schmajuk et al., "Antisense Oligonucleotides with Different Backbones," <i>The Journal of Biological Chemistry</i> 274:21783-21789 (1999)
*	Schmidt et al., "Base and sugar requirements for RNA cleavage of essential nucleoside residues in internal loop B of the hairpin ribozyme: implications for secondary structure," <i>Nucleic Acids Research</i> 24:573-581 (1996)
*	Schwarz et al., "Asymmetry in the Assembly of the RNAi Enzyme Complex," <i>Cell</i> , 1115, 199-208 (2003)
*	Schwarze et al., "In Vivo Protein Transduction: Delivery of a Biologically Active Protein into the Mouse," <i>Science</i> 285:1569-1572 (1999)
*	Segarra et al., "Molecular characterization of the <i>Enterococcus faecalis</i> cytolysin activator," <i>Infection and Immunity</i> , 59, 4, 1239-1246 (1991) Database CAPLUS on STN, AN:1992:230597
*	Senger et al., "Vascular permeability factor (VPF, VEGF) in tumor biology," <i>Cancer and Metastasis Reviews</i> 12:303-324 (1993)
*	Sheehan et al., "Biochemical properties of phosphonoacetate and thiophosphonoacetate oligodeoxyribonucleotides," <i>Nucleic Acids Research</i> , 31 (14), 4109-4118 (2003)
*	Shweiki et al., "Patterns of Expression of Vascular Endothelial Growth Factor (VEGF) and VEGF Receptors in Mice Suggest a Role in Hormonally Regulated Angiogenesis," <i>J. Clin. Invest.</i> 91:2235-2243 (1993)
*	Silverman et al., "Selective RNA Cleavage by Isolated RNase L Activated with 2-5A Antisense Chimeric Oligonucleotides," <i>Methods in Enzymology</i> 313:522-533 (1999)
*	Simantov et al., "Dopamine-Induced Apoptosis in Human Neuronal Cells: Inhibition by Nucleic Acids Antisense to the Dopamine Transporter," <i>Neuroscience</i> , 74(1):39-50 (1996)
*	Snyder et al., "Defining Genes in the Genomics Era," <i>Science</i> , 300, 258-260 (2003)

EXAMINER	DATE CONSIDERED
----------	-----------------

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		<b>Filing Date:</b> June 27, 2003	<b>Group:</b> 1645

*	Sommer et al., "The Spread and Uptake Pattern of Intracerebrally Administered Oligonucleotides in Nerve and Glial Cell Populations of the Rat Brain," <u>Antisense &amp; Nucleic Acid Drug Development</u> 8:75-85 (1998)
*	Sproat et al., "Highly efficient chemical synthesis of 2'-O-methyloligoribonucleotides and tetrabiotinylated derivatives; novel probes that are resistant to degradation by RNA or DNA specific nucleases," <u>Nucleic Acids Research</u> , 17:3373-3386 (1989)
*	Stein and Cheng, "Antisense Oligonucleotides as Therapeutic Agents - Is the Bullet Really Magical?" <u>Science</u> 261:1004-1288 (1993)
*	Stein et al., "A Specificity Comparison of Four Antisense Types: Morpholino, 2'-O-Methyl RNA, DNA, and Phosphorothioate DNA," <u>Antisense &amp; Nucleic Acid Drug Development</u> 7:151-157 (1997)
*	Strobel and Dervan, "Site-Specific Cleavage of a Yeast Chromosome by Oligonucleotide-Directed Triple-Helix Formation," <u>Science</u> 249:73-75 (1990)
*	Strobel et al., "Exocyclic Amine of the Conserved G·U Pair at the Cleavage Site of the <i>Tetrahymena</i> Ribozyme Contributes to 5'-Splice Site Selection and Transition State Stabilization," <u>Biochemistry</u> 35:1201-1211 (1996)
*	Strobel et al., "Minor Groove Recognition of the Conserved G·U Pair at the <i>Tetrahymena</i> Ribozyme Reaction Site," <u>Science</u> 267:675-679 (1995)
*	Sullenger and Cech, "Ribozyme-mediated repair of defective mRNA by targeted trans-splicing," <u>Nature</u> 371:619-622 (1994)
*	Sullenger et al., "Overexpression of TAR Sequences Renders Cells Resistant to Human Immunodeficiency Virus Replication," <u>Cell</u> 63:601-608 (1990)
*	Szostak and Ellington, "Ch. 20 - In Vitro Selection of Functional RNA Sequences," in <u>The RNA World</u> , edited by Gesteland and Atkins, Cold Spring Harbor Laboratory Press, pp. 511-533 (1993)
*	Szostak, " <i>In Vitro</i> Genes," <u>TIBS</u> 17:89-93 (1993)

EXAMINER	DATE CONSIDERED
----------	-----------------

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(Use several sheets if necessary)

**Applicant:**

McSwiggen et al.

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**Group:**

1645

*	Takahashi et al., "Markedly Increased Amounts of Messenger RNAs for Vascular Endothelial Growth Factor and Placenta Growth Factor in Renal Cell Carcinoma Associated with Angiogenesis," <i>Cancer Research</i> 54:4233-4237 (1994)
*	Tang et al., "Examination of the catalytic fitness of the hammerhead ribozyme by in vitro selection," <i>RNA</i> 3:914-925 (1997)
*	Thomas et al., "Enhancing polyethylenimine's delivery of plasmid DNA into mammalian cells," <i>PNAS</i> , 99, 14640-14645 (2002)
*	Torrence et al., "Targeting RNA for degradation with a (2'-5') oligoadenylate-antisense chimera," <i>Proc. Natl. Acad. Sci. USA</i> 90:1300-1304 (1993)
*	Uhlmann and Peyman, "Antisense Oligonucleotides: A New Therapeutic Principle," <i>Chemical Reviews</i> 90:544-584 (1990)
*	Ui-Tei et al., "Guidelines for the selection of highly effective siRNA sequences for mammalian and chick RNA interference," <i>Nucleic Acids Research</i> , 32, 3, 936-948 (2004) [also referred to as doi:10.1093/nar/gkh247]
*	Usman et al., "Hammerhead ribozyme engineering," <i>Current Opinion in Structural Biology</i> 1:527-533(1996)
*	Vaish et al., "Isolation of Hammerhead Ribozymes with Altered Core Sequences by <i>in Vitro</i> Selection," <i>Biochemistry</i> 36:6495-6501 (1997)
*	Verdel et al., "RNAi-Mediated Targeting of Heterochromatin by the RITS Complex," <i>Science</i> , 303, 672-676 (2004)
*	Wang et al., "Delivery of Antisense Oligodeoxyribonucleotides Against the Human Epidermal Growth Factor Receptor into Cultured KB Cells with Liposomes Conjugated to Folate via Polyethylene Glycol," <i>Proc. Natl. Acad. Sci. USA</i> 92:3318-3322 (1995)
*	Werner and Uhlenbeck, "The effect of base mismatches in the substrate recognition helices of hammerhead ribozymes on binding and catalysis," <i>Nucleic Acids Research</i> 23:2092-2096 (1995)
*	Woolf et al., "Specificity of Antisense Oligonucleotides <i>in vivo</i> ," <i>Proc. Natl. Acad. Sci. USA</i> 89:7305-7309 (1992)

EXAMINER

DATE CONSIDERED

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McSwiggen et al.

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**Group:**

1645

*	Wu and Kaufman, J. Biol. Chem., 272, 1921-1926 (1997)
*	Wu-Pong et al., "Nucleic Acid Drug Delivery, Part 2; Delivery to the Brain," <u>BioPharm</u> 32-38 (1999)
*	Yamada et al., "Nanoparticles for the delivery of genes and drugs to human hepatocytes," <i>Nature Biology</i> , Published online: 29 June 2003, doi:10.1038/nbt843 (August 2003 Volume 21 Number 8 pp 885-890) (2003)
*	Yang et al., "Hydrodynamic injection of viral DNA: A mouse model of acute hepatitis B virus infection," <i>PNAS</i> , 99, 21, 13825-13830 (2002)
*	Yuan et al., "Targeted cleavage of mRNA by human RNase P," <u>Proc. Natl. Acad. Sci. USA</u> 89:8006-8010 (1992)
*	Zamore, Phillip D., "RNA interference: listening to the sound of silence," <i>Nature Structural Biology</i> , 8(9), 746-750 (2001)
*	Zarrinkar and Williamson, "The P9.1-P9.2 peripheral extension helps guide folding of the <i>Tetrahymena</i> ribozyme," <u>Nucleic Acids Research</u> 24:854-858 (1996)
*	Ziche et al., "Angiogenesis Can Be Stimulated or Repressed <i>In Vivo</i> by a Change in GM3:GD3 Ganglioside Ratio," <i>Laboratory Investigation</i> 67:711-715 (1992)
*	Zimmerly et al., "A Group II Intron RNA is a Catalytic Component of a DNA Endonuclease Involved in Intron Mobility," <u>Cell</u> 83:529-538 (1995)
*	Zinnen et al., "Chemically Modified siRNAa: Potential Anti-viral Hepatitis Therapeutics" (Abstract) March 2004

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.